

REMARKS

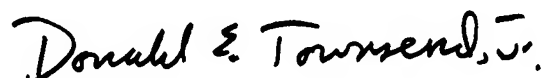
The amendments to Claims 1, 3, 5-8 and 10, and the addition of new claims 11-21, are made to eliminate the multiple dependencies, to place the claims in proper U.S. format, and to conform the claims to the claims as amended in the international application in the Amendment under Article 11 dated April 12, 2001. The present amendment is deemed not to add new matter. Claims 1, 3, 5-8 and 10-21 are in the application.

It is respectfully submitted that this application is now in condition for examination on the merits and early action and allowance thereof is accordingly respectfully requested.

Respectfully submitted,



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MARKED-UP VERSIONS OF AMENDED CLAIMS 1, 3, 5-8 AND 10:

1. (Amended) An adhesive composition [characterized as containing a compound (X) having a crosslinkable or polymerizable group and a compound (Y) which is activated when exposed to an active energy radiation to generate species that cause crosslinking or polymerization of at least a part of the compound (X)]

(A) a compound having at least two hydrolysable silyl groups in a molecule;

(B) a compound which initiates crosslinking of the compound (A);

(C) a compound having a polymerizable group in a molecule;

(D) a compound which is activated by irradiation to initiate polymerization of the polymerizable group in the compound (C); and

(E) a thixotropic agent

wherein:

said adhesive composition has a viscosity at 25 °C of 1 - 10,000,000 cps, conversions of the compounds (A) and (C)[; a conversion of the compound (X)] immediately after exposure of the adhesive composition to the active energy radiation [does not exceed] are in the range of 10 - 70 %, the composition immediately after its exposure to the active energy radiation has a dynamic shear modulus in the range of $10^5 - 10^7$ Pa; and [a conversion of the compound (X)]

the conversions of the compounds (A) and (C) after exposure of the adhesive composition to the active energy radiation and subsequent 24-hour aging at 25 °C [is] are in the range of 50 - 100 %[,], and after exposure of the adhesive composition to the active energy radiation and subsequent 24-hour aging at 25 °C, the cured composition has an elongation at break of 10 - 1,000 % and a dynamic tensile modulus in the range of $10^5 - 10^9$ Pa.

3. (Amended) The adhesive composition as recited in claim 1, [characterized in that the conversion] wherein the conversions of the [compound (X)] compounds (A) and (C) immediately after exposure of the adhesive composition to the active energy radiation are in the range of 10 - 70 % [does not exceed 30 %] and the adhesive composition has a viscosity at 25 °C of 1 - 10,000,000 cps; and

the [conversion] conversions of the [compound (X)] compounds (A) and (C) after exposure of the adhesive composition to the active energy radiation and subsequent 12-hour aging at 25 °C is in the range of 50 - 100 %.

5. (Amended) The adhesive composition as recited in claim [4] 1, [characterized in that] wherein the hydrolyzable silyl group in the compound (A) is a alkoxysilyl group, and the compound (A) is a compound containing the alkoxysilyl group substituted in a polymer selected from polyalkylene glycols and polyolefins.

6. (Amended) The adhesive composition as recited in claim [4 or 5] 1, [characterized in that] wherein the polymerizable group in

the compound (C) is a free-radically polymerizable group and the compound (D) is a photochemically free-radical generating agent.

7. (Amended) The adhesive composition as recited in [any one of claims 4-6] claim 1, [characterized in that] wherein the free-radically polymerizable group in the compound (C) is a polymerizable group selected from acryloyl and methacryloyl groups.

8. (Amended) The adhesive composition as recited in [any one of claims 4-7] claim 1, [characterized in that] wherein the compound (C) contains at least one type of compound (F) containing at least one polymerizable group in a molecule and having a weight average molecular weight of not less than 3,000.

10. (Amended) A method of joining members [characterized as] comprising, in sequence, applying the adhesive composition as recited in [any one of claims] claim 1[-9] to one of the members, exposing a top surface of the applied adhesive composition layer to an active energy radiation, and combining the one member with the other member.

C L A I M S

1. (Amended) An adhesive composition characterized as containing:

5 (A) a compound having at least two hydrolyzable silyl groups in a molecule;

(B) a compound which initiates crosslinking of the compound (A);

10 (C) a compound having a polymerizable group in a molecule;

(D) a compound which is activated by irradiation to initiate polymerization of the polymerizable group in the compound (C); and

15 (E) a thixotropic agent wherein:

said adhesive composition has a viscosity at 25 °C of 1 - 10,000,000 cps, conversions of the compounds (A) and (C) immediately after exposure of the adhesive composition to an active energy radiation are in the range of 10 - 70 %, the composition immediately after its exposure to the active energy radiation has a dynamic shear modulus in the range of 20 $10^5 - 10^7$ Pa; and

the conversions of the compounds (A) and (C) after exposure of the adhesive composition to the active energy radiation and subsequent 24-hour aging at 25 °C are in the 25

range of 50 - 100 %, and after exposure of the adhesive composition to the active energy radiation and subsequent 24-hour aging at 25 °C, the cured composition has an elongation at break of 10 - 1,000 % and a dynamic tensile modulus in the range of $10^5 - 10^9$ Pa.

2. (Deleted)

3. (Amended) The adhesive composition as recited in claim 1, characterized in that the conversions of the compounds (A) and (C) immediately after exposure of the adhesive composition to an active energy radiation are in the range of 10 - 70 % and the adhesive composition has a viscosity at 25 °C of 1 - 10,000,000 cps; and

the conversions of the compounds (A) and (C) after exposure of the adhesive composition to the active energy radiation and subsequent 12-hour aging at 25 °C are in the range of 50 - 100 %.

4. (Deleted)

(Blanked below)

5. (Amended) The adhesive composition as recited in claim 1 or 3, characterized in that the hydrolyzable silyl group in the compound (A) is a alkoxysilyl group, and the compound (A) is a compound containing the alkoxysilyl group substituted in a polymer selected from polyalkylene glycols and polyolefins.

6. (Amended) The adhesive composition as recited in any one of claims 1, 3 and 5, characterized in that the polymerizable group in the compound (C) is a free-radically polymerizable group and the compound (D) is a photochemically free-radical generating agent.

7. (Amended) The adhesive composition as recited in any one of claims 1, 3, 5 and 6, characterized in that the free-radically polymerizable group in the compound (C) is a polymerizable group selected from acryloyl and methacryloyl groups.

8. (Amended) The adhesive composition as recited in any one of claims 1, 3, 5, 6 and 7, characterized in that the compound (C) contains at least one type of compound (F) containing at least one polymerizable group in a molecule and having a weight average molecular weight of not less than 3,000.

9. (Deleted)

10. (Amended) A method of joining members characterized as comprising, in sequence, applying the adhesive

composition as recited in any one of claims 1, 3 and 5 - 8 to one of the members, exposing a top surface of the applied adhesive composition layer to an active energy radiation and combining the one member with the other member.

5 11. (Added) An adhesive composition characterized as containing:

 a compound (X) having a crosslinkable or polymerizable group; and

10 a compound (Y) which is activated when exposed to an active energy radiation to generate species that cause crosslinking or polymerization of at least a part of the compound (X) wherein:

15 a conversion of the compound (X) immediately after exposure of the adhesive composition to the active energy radiation does not exceed 30 %, and the composition has a viscosity at 25 °C of 1 - 10,000,000 cps; and

20 a conversion of the compound (X) after exposure of the adhesive composition to the active energy radiation and subsequent 12-hour aging at 25 °C is in the range of 50 - 100 %.

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